CALIFORNIA STANDARDS TEST
INTEGRATED MATHEMATICS 2

(Blueprint adopted by SBE 10/9/02 and applies to subsequent California Standards Tests)

CALIFORNIA CONTENT STANDARDS	Standards Assessed	%
Algebra I	**20 items**	**31%**
3.0 Students solve equations and inequalities involving absolute values.	✓	
9.0* Students solve a system of two linear equations in two variables algebraically and are able to interpret the answer graphically. Students are able to solve a system of two linear inequalities in two variables and to sketch the solution sets.	✓	
15.0* Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems	✓	
16.0 Students understand the concepts of a relation and a function, determine whether a given relation defines a function, and give pertinent information about given relations and functions.	✓	
17.0 Students determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression.	✓	
18.0 Students determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion.	✓	
21.0* Students graph quadratic functions and know that their roots are the *x*-intercepts.	✓	
22.0 Students use the quadratic formula or factoring techniques or both to determine whether the graph of a quadratic function will intersect the x-axis in zero, one, or two points.	✓	
23.0* Students apply quadratic equations to physical problems, such as the motion of an object under the force of gravity.	✓	
Standard Set 24.0 Students use and know simple aspects of a logical argument:		
24.1 Students explain the difference between inductive and deductive reasoning and identify and provide examples of each.	✓	
24.2 Students identify the hypothesis and conclusion in logical deduction.	✓	
24.3 Students use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute an assertion.	✓	
Geometry	**40 items**	**61%**
1.0* Students demonstrate understanding by identifying and giving examples of undefined terms, axioms, theorems, and inductive and deductive reasoning.	✓	
2.0* Students write geometric proofs, including proofs by contradiction.	✓	
3.0* Students construct and judge the validity of a logical argument and give counterexamples to disprove a statement.	✓	

✓ Standard assessed on the California Standards Test

*Key standards (Mathematics Framework for California Public Schools) compreise a minimum of 70% of the test.

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CALIFORNIA CONTENT STANDARDS	Standards Assessed	%
4.0* Students prove basic theorems involving congruence and similarity.	✓	
5.0 Students prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.	✓	
7.0* Students prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.	✓	
13.0 Students prove relationships between angles in polygons by using properties of complementary, supplementary, vertical, and exterior angles.	✓	
14.0* Students prove the Pythagorean theorem.	✓	
15.0 Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles.	✓	
16.0* Students perform basic constructions with a straightedge and compass, such as angle bisectors, perpendicular bisectors, and the line parallel to a given line through a point off the line.	✓	
18.0* Students know the definitions of the basic trigonometric functions defined by the angles of a right triangle. They also know and are able to use elementary relationships between them. For example, $\tan(x) = \sin(x)/\cos(x)$, $(\sin(x))^2 + (\cos(x))^2 = 1$.	✓	
19.0* Students use trigonometric functions to solve for an unknown length of a side of a right triangle, given an angle and a length of a side.	✓	
20.0 Students know and are able to use angle and side relationships in problems with special right triangles, such as 30°, 60°, and 90° triangles and 45°, 45°, and 90° triangles.	✓	
22.0* Students know the effect of rigid motions on figures in the coordinate plane and space, including rotations, translations, and reflections.	✓	
Algebra II/ Probability and Statistics	**5 items**	**8%**
18.0* Students use fundamental counting principles to compute combinations and permutations.	✓	
19.0* Students use combinations and permutations to compute probabilities.	✓	
Probability and Statistics		
1.0 Students know the definition of the notion of *independent events* and can use the rules for addition, multiplication, and complementation to solve for probabilities of particular events in finite sample spaces.	✓	
INTEGRATED 2 TOTAL	**65 items**	**100%**

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